

October 15, 2010

Letter of Intent

Between

**Fermi National Accelerator Laboratory
(FNAL)**

And

**The European Organization for Nuclear Research
(CERN)**

(The Parties)

Concerning

**Research on Multi-Megawatt Proton Facilities
Based on Superconducting RF Technologies
and Energy Frontier Colliders**

October 15, 2010

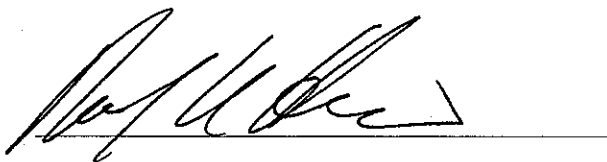
The Parties to this Letter having a common interest in the development of Superconducting RF Technologies and Energy Frontier Colliders are currently negotiating specific Collaborative Agreements for scientific cooperation in these areas of interest. Such Collaboration would have as its aim the development of knowledge related to Superconducting RF Technologies, Superconducting Magnet Technologies, and Multi - TeV Lepton Colliders and the exchange of information that would facilitate solutions to associated technical issues.

The Parties intend to collaborate in the research, development, and scientific activities referred to above. Collaborative efforts for which the parties intend to conclude agreements include but are not limited to:

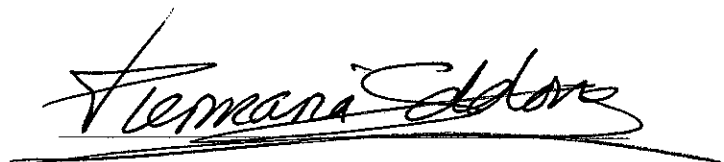
- (1) Organization of meetings to assess progress and/or performance of technology or systems
- (2) Exchange of scientific and technical personnel
- (3) Joint R&D related to the topics above beneficial to both parties, which may include;
 - a. R&D on accelerator and detector technologies in support of an electron-positron collider (CLIC) or a Muon Collider
 - b. Exploration of physics research opportunities at multi-TeV lepton colliders
 - c. R&D on superconducting radio-frequency systems and related technologies
 - d. R&D on operational issues associated with high power H- linacs
 - e. R&D on the generation and transport of high intensity, low energy H- beams
 - f. R&D on superconducting magnets based on Nb₃Sn technology

The Parties intend that this letter will be followed by specific Collaborative Agreements to ensure cooperation in areas of interest expressed above.

CERN is represented here by its Director General Rolf Heuer
and
FNAL by its Director Pier Oddone



Rolf Heuer, Director General



Pier Oddone, Director